

Appl. No. : 10/765,546
Filed : January 26, 2004

AMENDMENTS TO THE SPECIFICATION

IN THE SPECIFICATION:

Please replace paragraph [0031] with the following amended paragraph:

Figure 5 is a cross-sectional side view of the illustrative integrated circuit of Figure 4 with a contact or via hole 29 cut through the insulating layer 25 down to the magneto-resistive bit, or more preferably down to the protective layer [[21]]19. The contact or via hole 29 is preferably placed approximately in the center of one of the bit ends 4a and 4b (see Figure 1) to establish an electrical connection to the bit. The contact or via hole 29 preferably does not extend down past the top of the protective layer [[21]]19, or outside the perimeter edges of the magneto-resistive bit, as shown for example in Figure 1. The side edges 27 of the magneto-resistive bit are thus not exposed to later processing, but rather remain covered and protected by the insulating layer 25. Because the top surface of the magneto-resistive bit is protected by the protective layer [[21]]19, and because the side walls 27 of the magneto-resistive bit are protected by the insulating layer 25, the contact or via holes 29 may be created using conventional processing steps including, for example, an oxygen asher photoresist removal step. This may significantly reduce the cost of producing the magneto-resistive memory and may increase the overall yield that can be achieved.

Please replace paragraph [0032] with the following amended paragraph:

After creation of the contact or via holes 29, a metal layer is preferably placed over the insulating layer 25 and etched to form a desired metal pattern. The metal preferably extends down into the contact or via hole 29, allowing the metal layer to fill contact or via hole 29 and contact the protective layer [[21]]19. Because the protective layer [[21]]19 is preferably at least partially conductive, an electrical connection is made between the metal layer and the magneto-resistive bit. Alternatively, it is contemplated that the contact or via hole 29 may first be

Appl. No. : **10/765,546**
Filed : **January 26, 2004**

filled with a low resistance material such as tungsten before providing the metal layer. This may reduce the overall resistance of the contact or via hole 29.

Appl. No. : **10/765,546**
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AMENDMENTS TO THE DRAWINGS

The attached drawing Replacement Sheets include changes to Figures 4 and 5. In Figure 4, reference numeral "21" has been replaced with reference numeral "19." In Figure 5, reference numeral "24" has been replaced with reference numeral "19."

Attachment: Replacement sheets

Annotated sheets showing changes